



## SEQUENCE LISTING

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<120> NOVEL HEME PEPTIDE

<130> N0008.0001

<140> 10/507,156

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<150> PCT/JP03/02394

<151> 2003-02-28

<150> JP 2002-058086

<151> 2002-03-04

<160> 18

<170> PatentIn Ver. 3.2

<210> 1

<211> 104

<212> PRT

<213> Equus caballus

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Gly Asp Val Glu Lys Gly Lys Lys Ile Phe Val Gln Lys Cys Ala Gln  
1 5 10 15

Cys His Thr Val Glu Lys Gly Gly Lys His Lys Thr Gly Pro Asn Leu  
20 25 30

His Gly Leu Phe Gly Arg Lys Thr Gly Gln Ala Pro Gly Phe Thr Tyr  
35 40 45

Thr Asp Ala Asn Lys Asn Lys Gly Ile Thr Trp Lys Glu Glu Thr Leu  
50 55 60

Met Glu Tyr Leu Glu Asn Pro Lys Lys Tyr Ile Pro Gly Thr Lys Met  
65 70 75 80

Ile Phe Ala Gly Ile Lys Lys Lys Thr Glu Arg Glu Asp Leu Ile Ala  
85 90 95

Tyr Leu Lys Lys Ala Thr Asn Glu  
100

<210> 2

<211> 85

<212> PRT

<213> Porphyra yezoensis

&lt;400&gt; 2

Ala Asp Leu Asp Asn Gly Glu Lys Val Phe Ser Ala Asn Cys Ala Ala  
 1 5 10 15

Cys His Ala Gly Gly Asn Asn Ala Ile Met Pro Asp Lys Thr Leu Lys  
 20 25 30

Lys Asp Val Leu Glu Ala Asn Ser Met Asn Thr Ile Asp Ala Ile Thr  
 35 40 45

Tyr Gln Val Gln Asn Gly Lys Asn Ala Met Pro Ala Phe Gly Gly Arg  
 50 55 60

Leu Val Asp Glu Asp Ile Glu Asp Ala Ala Asn Tyr Val Leu Ser Gln  
 65 70 75 80

Ser Glu Lys Gly Trp  
 85

&lt;210&gt; 3

&lt;211&gt; 15

&lt;212&gt; PRT

<213> *Porphyra yezoensis*

&lt;400&gt; 3

Phe Ser Ala Asn Cys Ala Ala Cys His Ala Gly Gly Asn Asn Ala  
 1 5 10 15

&lt;210&gt; 4

&lt;211&gt; 9

&lt;212&gt; PRT

<213> *Equus caballus*

&lt;400&gt; 4

Cys Ala Gln Cys His Thr Val Glu Lys  
 1 5

&lt;210&gt; 5

&lt;211&gt; 22

&lt;212&gt; PRT

<213> *Equus caballus*

&lt;400&gt; 5

Val Gln Lys Cys Ala Gln Cys His Thr Val Glu Lys Gly Gly Lys His  
 1 5 10 15

Lys Thr Gly Pro Asn Leu  
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&lt;210&gt; 6

&lt;211&gt; 65

&lt;212&gt; PRT

<213> *Equus caballus*

&lt;400&gt; 6

Gly Asp Val Glu Lys Gly Lys Lys Ile Phe Val Gln Lys Cys Ala Gln  
 1 5 10 15

Cys His Thr Val Glu Lys Gly Gly Lys His Lys Thr Gly Pro Asn Leu  
 20 25 30

His Gly Leu Phe Gly Arg Lys Thr Gly Gln Ala Pro Gly Phe Thr Tyr  
 35 40 45

Thr Asp Ala Asn Lys Asn Lys Gly Ile Thr Trp Lys Glu Glu Thr Leu  
 50 55 60

Met  
 65

&lt;210&gt; 7

&lt;211&gt; 9

&lt;212&gt; PRT

&lt;213&gt; Equus caballus

&lt;400&gt; 7

Cys Ala Gln Cys His Thr Val Glu Lys  
 1 5

&lt;210&gt; 8

&lt;211&gt; 21

&lt;212&gt; PRT

&lt;213&gt; Porphyra yezoensis

&lt;400&gt; 8

Val Phe Ser Ala Asn Cys Ala Ala Cys His Ala Gly Gly Asn Asn Ala  
 1 5 10 15

Ile Met Pro Asp Lys  
 20

&lt;210&gt; 9

&lt;211&gt; 17

&lt;212&gt; PRT

&lt;213&gt; Equus caballus

&lt;400&gt; 9

Lys Gly Lys Lys Ile Phe Val Gln Lys Cys Ala Gln Cys His Thr Val  
 1 5 10 15

Glu

&lt;210&gt; 10

&lt;211&gt; 29

&lt;212&gt; PRT

&lt;213&gt; Porphyra yezoensis

<400> 10

Val Phe Ser Ala Asn Cys Ala Ala Cys His Ala Gly Gly Asn Asn Ala  
1 5 10 15

Ile Met Pro Asp Lys Thr Leu Lys Lys Asp Val Leu Glu  
20 25

<210> 11

<211> 75

<212> PRT

<213> Artificial Sequence

**<220>**

<223> Description of Artificial Sequence: Synthetic Formula Peptide

**<220>**

<221> MISC FEATURE

 $\langle 222 \rangle \quad (1) \dots (20)$ 

<223> this region may encompass 1-20 variable amino acids or not be present; see specification as filed for detailed description of preferred embodiments

 $\langle 220 \rangle$ 

<221> MISC FEATURE

$$\langle 222 \rangle \quad (22) \quad \dots \quad (23)$$

<223> any amino acid

**<220>**

<221> MISC FEATURE

<222> (25)

<223> His, Lys or Arg

<220>

<221> MISC FEATURE

<222> (26) . . (75)

<223> this region may encompass 1-50 variable amino acids or not be present; see specification as filed for detailed description of preferred embodiments

<400> 11

Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa  
1 5 10 15

Xaa Xaa Xaa Xaa Cys Xaa Xaa Cys Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa  
20 25 30

Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa  
35 40 45

Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa  
50 55 60

Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa  
65 70 75

<210> 12  
 <211> 75  
 <212> PRT  
 <213> Artificial Sequence

<220>  
 <223> Description of Artificial Sequence: Synthetic Formula  
 Peptide

<220>  
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 <222> (1)..(20)  
 <223> this region may encompass 1-20 variable amino acids or  
 not be present; see specification as filed for detailed  
 description of preferred embodiments

<220>  
 <221> MISC\_FEATURE  
 <222> (22)..(23)  
 <223> Ala, Gln, Lys, Arg or Val

<220>  
 <221> MISC\_FEATURE  
 <222> (25)  
 <223> His, Lys or Arg

<220>  
 <221> MISC\_FEATURE  
 <222> (26)..(75)  
 <223> this region may encompass 1-50 variable amino acids or  
 not be present; see specification as filed for detailed  
 description of preferred embodiments

<400> 12  
 Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa  
 1 5 10 15  
 Xaa Xaa Xaa Xaa Cys Xaa Xaa Cys Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa  
 20 25 30  
 Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa  
 35 40 45  
 Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa  
 50 55 60  
 Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa  
 65 70 75

<210> 13  
 <211> 75  
 <212> PRT  
 <213> Artificial Sequence

<220>  
 <223> Description of Artificial Sequence: Synthetic Formula Peptide

<220>  
 <221> MISC\_FEATURE  
 <222> (1)..(20)  
 <223> this region may encompass 1-20 variable amino acids or not be present; see specification as filed for detailed description of preferred embodiments

<220>  
 <221> MISC\_FEATURE  
 <222> (23)  
 <223> Gln or Ala

<220>  
 <221> MISC\_FEATURE  
 <222> (26)..(75)  
 <223> this region may encompass 1-50 variable amino acids or not be present; see specification as filed for detailed description of preferred embodiments

<400> 13  
 Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa  
 1 5 10 15  
 Xaa Xaa Xaa Xaa Cys Ala Xaa Cys His Xaa Xaa Xaa Xaa Xaa Xaa Xaa  
 20 25 30  
 Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa  
 35 40 45  
 Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa  
 50 55 60  
 Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa  
 65 70 75

<210> 14  
 <211> 4  
 <212> PRT  
 <213> Artificial Sequence

<220>  
 <223> Description of Artificial Sequence: Synthetic peptide

<400> 14  
 Thr Val Glu Lys  
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<210> 15  
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<220>

<223> Description of Artificial Sequence: Synthetic peptide

<400> 15

Phe Ser Ala Asn

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<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic peptide

<400> 16

Ala Gly Gly Asn Asn Ala

1

5

<210> 17

<211> 11

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic peptide

<400> 17

Val Glu Lys Cys Ala Glu Cys His Thr Val Glu

1

5

10

<210> 18

<211> 14

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic peptide

<400> 18

Thr Val Glu Lys Gly Gly Lys His Lys Thr Gly Pro Asn Leu

1

5

10